

# STATE OF SOLAR FINANCING

Presented by:



## 3 KEY POINTS

- 1. All projects are unique
- Creativity is necessary due to capital constraints
- 3. To be cost-effective, projects need to be large in scope and timely

## PROJECTS ARE UNIQUE



SITE LOCATION



Customer Needs  $\rightarrow$  E<sub>2</sub>



Environmental  $(CO_2, NO_2, SO_2)$ 



**UTILITY SERVICE TERRITORY** 



TYPE OF **CUSTOMER** 



### CREATIVITY IS NECESSARY

Engage a variety of different funding sources:

- Banks
- Tax Equity Partners
- Government Loan Guarantees and Bond
  - Grants (USDA, Treasury, DOE)

\*Financial Complexity made Simple\*



## GO BIG!

- Drives down cost
- Entices larger investors (Shows larger return)
- Leads to Return of Investment of22%
- Benefit of Aggregating Solar Products





## BE TIMELY!

- Incentives are time sensitive and equity investor wants 100% depreciation this year
- Prices are low on solar panels



### PROCESS TO FOLLOW

- 1. Price system components
- 2. Check utility company renewable policies
- 3. Search applicable incentives (<a href="http://www.dsireusa.org">http://www.dsireusa.org</a>)
- 4. SREC Market (high-risk, high reward) v Feed-in-Tariff (stable return)
- 5. Engage range of potential investors based on project particulars



# Two products are created with generation of electricity: Electrical Power and a Renewable Energy Certificate (REC)



#### Renewable Generation Source **Electricity Pathway RECs Pathway** Placing renewable electricity RECs represent the right to claim Electricity and RECs can be, and often the attributes and benefits of the on the grid has the impact are, sold separately of reducing the need for fossil renewable generation source 1 REC = 1000 kilowatt-hours fuel-based electricity generation (or 1 megawatt-hour) RECs are tracked through to serve consumer demand contract arrangements. or REC tracking systems Electrons that make up commodity Electricity and RECs electricity are physically the same can be distributed over and cannot be tracked independently Certified and verified products diverse geographical ensure that only one buyer can areas Since all electrons are equal, it is claim each 1000 kilowatt-hours (REC) of renewable electric generation difficult to know what source RECs offset greenhouse produced your electricity gas emissions associated RECs represent the same attributes with purchased electricity at the point of generation as they RECs help address this challenge do at the point of use Point of Use Once your organization makes a claim, your REC

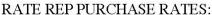
cannot be sold. Your organization must retire its RECs to prevent double claims in the future





## **Utility Companies Have Power Purchase Plans**







The rate the Company will pay each Customer for energy and capacity purchased from their Facility will be established in advance by written contract with the Company as filed and approved by the Commission and will be based on the RATE REP PURCHASE RATES. the RATE REP PURCHASE RATES may be adjusted by the Company as circumstances warrant through the IURC's 30-day administrative filing process. Unless otherwise agreed, the RATE REP PURCHASE RATES shall be:

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(a)	Solar
100/	COLUM

a. Capacity None

b. Energy

(a) For Facilities generating 20 kW to 100 kW: 24.0¢ per KWH
(b) For Facilities generating more than 100 kW: 20.0¢ per KWH

(b) Wind

a. Capacity None

b. Energy

(a) For Facilities generating 50 kW to 100 kW: 14.0¢ per KWH
(b) For Facilities generating 100 kW to 1 MW: 10.5¢ per KWH

(c) For Facilities generating more than 1 MW: 7.5¢ per KWH

(c) Biomass

a. Capacity
b. Energy
\$6.18 per KW per month
8.5¢ per KWH



## **Finance Matrix**



#### \$0-\$2 Million

- Local Banks
- Product Supplier
  - Competitors

#### \$2 Million-\$5 Million

- National Banks
- Tax Equity Partners
- High Wealth Individuals
  - Product Supplier

#### \$5Million-\$100Million

- National Banks with Solar Focus
  - Utility Companies
    - Foreign Money



## **Local Banks Favor this Model**



Solar Plant Direct Cost \$50,000

Federal Grant \$15,000

Loan Amount \$35,000

10 year Loan 5% \$4438/yr

Feed-In-Tariff revenue \$5325/yr

\*Factor 1.2 minimum revenue over costs





## Thank you!

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